

Title (en)

Reverse blasing apparatus for solar battery module

Title (de)

Eine umgekehrte Vorspannung liefernden Generator für einen Solarzellenmodul

Title (fr)

Générateur de tension de polarisation inverse pour un module de cellules solaires

Publication

EP 1052704 A3 20020502 (EN)

Application

EP 00106128 A 20000321

Priority

- JP 13406999 A 19990514
- JP 22247699 A 19990805
- JP 22851999 A 19990812
- JP 22852099 A 19990812

Abstract (en)

[origin: EP1052704A2] A reverse biasing apparatus is used to remove (10) short-circuited portions in a solar battery module having multiple strings of solar cells each including a first electrode layer, a photovoltaic semiconductor layer and a second electrode layer formed on a glass substrate, by applying a reverse bias voltage between the electrodes of adjacent solar cells. The reverse biasing apparatus comprises probes (15) to be in contact with the electrodes of adjacent three or more strings of solar cells, an actuator for actuating the probes (15) up and down, and a relay switch (17) for selecting, from the probes (15), a pair of probes (15) for applying the reverse bias voltage between the electrodes of an arbitrary pair of adjacent solar cells. The use of the reverse biasing apparatus can ensure an efficient reverse biasing process on a solar battery module (10) having integrated multiple strings of solar cells. <IMAGE> <IMAGE> <IMAGE>

IPC 1-7

H01L 31/20; **H01L 27/142**; **G01R 31/26**

IPC 8 full level

G01R 31/26 (2006.01); **H01L 27/142** (2006.01); **H01L 31/04** (2006.01); **H01L 31/042** (2006.01); **H01L 31/20** (2006.01)

CPC (source: EP US)

H01L 31/046 (2014.12 - EP US); **H01L 31/186** (2013.01 - EP US); **H01L 31/208** (2013.01 - EP US); **H02S 50/10** (2014.12 - EP US); **Y02E 10/50** (2013.01 - EP US); **Y02P 70/50** (2015.11 - EP US)

Citation (search report)

- [YA] US 5418680 A 19950523 - SAITO KEISHI [JP], et al
- [Y] US 4166918 A 19790904 - HANAK JOSEPH J [US], et al
- [Y] US 4464823 A 19840814 - IZU MASATSUGU [US], et al
- [XDY] PATENT ABSTRACTS OF JAPAN vol. 1998, no. 05 30 April 1998 (1998-04-30)

Cited by

KR101136949B1; CN101958363A; US2019037649A1; RU2701385C1; EP2782183A4; CN107093653A; CN103858018A; EP2767840A4; CN110086420A; US9799927B2; US8134111B2; US8679862B2; WO2017102168A1; TWI382188B

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

EP 1052704 A2 20001115; **EP 1052704 A3 20020502**; **EP 1052704 B1 20060607**; AT E329372 T1 20060615; AT E396505 T1 20080615; AU 2239800 A 20001116; AU 766466 B2 20031016; DE 60028452 D1 20060720; DE 60028452 T2 20070111; DE 60038990 D1 20080703; EP 1670067 A2 20060614; EP 1670067 A3 20061004; EP 1670067 B1 20080521; ES 2303705 T3 20080816; US 6365825 B1 20020402

DOCDB simple family (application)

EP 00106128 A 20000321; AT 00106128 T 20000321; AT 06005885 T 20000321; AU 2239800 A 20000320; DE 60028452 T 20000321; DE 60038990 T 20000321; EP 06005885 A 20000321; ES 06005885 T 20000321; US 53211100 A 20000321